

What is claimed is:

1 1. A cathode ray tube including an internal magnetic shield, a
2 mask, and a frame, characterized by

3 a beam trajectory deflecting means for deflecting, in
4 a vicinity of an entrance of the internal magnetic shield, a
5 trajectory of an electron beam in an opposite direction to a
6 direction in which the electron beam is to deviate in a vicinity
7 of the mask due to a magnetic field generated inside the cathode
8 ray tube.

1 2. A cathode ray tube including an internal magnetic shield, a
2 mask, and a frame, characterized in that

3 a magnetic flux, which acts on an electron beam that
4 passes through either an upper or lower area each occupying 20% of
5 an electron beam passing area along a vertical scanning direction,
6 proceeds in a direction from a tube axis toward the upper or lower
7 area while traveling between an entrance of the internal magnetic
8 shield and a vicinity of the center between the entrance and the
9 mask, and proceeds in an opposite direction of from the upper or
10 lower area toward the tube axis, while traveling between the
11 vicinity of the center and the mask, wherein the tube axis is an
12 axis of the electron beam passing area.

1 3. A cathode ray tube including an internal magnetic shield, a
2 mask, and a frame, characterized in that

3 in a magnetic flux which acts on an electron beam that
4 passes through either an upper or lower area each occupying 20% of
5 an electron beam passing area along a vertical scanning direction,
6 a magnetic flux density generated at an entrance of the internal
7 magnetic shield in a direction from a tube axis toward the upper
8 or lower area is higher than a density of each magnetic flux
9 generated at both ends of the electron beam passing area in a
10 horizontal scanning direction passing the tube axis, wherein the
11 tube axis is an axis of the electron beam passing area.

1 4. A cathode ray tube including an internal magnetic shield, a
2 mask, and a frame, characterized in that

3 in a magnetic flux which acts on an electron beam that
4 passes through either an upper or lower area each occupying 20% of
5 an electron beam passing area along a vertical scanning direction,
6 a curvature of a magnetic flux being absorbed by both ends of the
7 internal magnetic shield in a vicinity of an entrance thereof in
8 a vertical scanning direction is higher than a curvature of a
9 magnetic flux being absorbed by both ends of the internal magnetic
10 shield in the vicinity of the entrance in a horizontal scanning
11 direction, wherein the tube axis is an axis of the electron beam
12 passing area.

1 5. A cathode ray tube including an internal magnetic shield, a
2 mask, and a frame, characterized in that

3 in a magnetic flux which acts on an electron beam that
4 passes through either an upper or lower area each occupying 20% of
5 an electron beam passing area along a vertical scanning direction,
6 a magnetic flux density generated at an entrance of the internal
7 magnetic shield in a direction from a tube axis toward the upper
8 or lower area is higher than a density of each magnetic flux
9 generated at both ends of the electron beam passing area in a
10 horizontal scanning direction passing the tube axis, and a density
11 of each magnetic flux generated at both ends of the electron beam
12 passing area at the entrance in a vertical scanning direction is
13 higher at the center than at both ends in a horizontal direction,
14 wherein the tube axis is an axis of the electron beam passing
15 area.

1 6. A cathode ray tube including an internal magnetic shield, a
2 mask, and a frame, characterized in that
3 in a magnetic flux which acts on an electron beam that
4 passes through either an upper or lower area each occupying 20% of
5 an electron beam passing area along a vertical scanning direction,
6 a curvature of a magnetic flux being absorbed by both ends of the
7 internal magnetic shield in a vicinity of an entrance thereof in
8 a vertical scanning direction is higher than a curvature of a
9 magnetic flux being absorbed by both ends of the internal magnetic
10 shield in the vicinity of the entrance in a horizontal scanning
11 direction, and a curvature of a magnetic flux being absorbed by

12 both ends of the internal magnetic shield in a vicinity of the
13 entrance in a vertical scanning direction is higher at the center
14 than at both ends in a horizontal direction, wherein the tube axis
15 is an axis of the electron beam passing area.

1 7. A cathode ray tube including an internal magnetic shield, a
2 mask, and a frame, characterized in that

3 two sides of the internal magnetic shield facing each
4 other in a vertical scanning direction are higher than the other
5 two sides facing each other in a horizontal scanning direction at
6 an entrance of the internal magnetic shield from which an electron
7 beam enters the internal magnetic shield.

1 8. The cathode ray tube of Claim 7, wherein

2 two upper corners of each of the two sides facing in the
3 vertical scanning direction are cut.

1 9. The cathode ray tube of Claim 8, wherein

2 a horizontal length of each cut is less than half of a
3 horizontal length of the two sides facing in the vertical scanning
4 direction.

1 10. A cathode ray tube including

2 an internal magnetic shield which is a pyramid including
3 two long sides opposite to each other and two short sides opposite

4 to each other, and has an opening at the top thereof,
5 a mask, and
6 a frame, characterized in that
7 each long side has an extension at a horizontal center
8 of an end thereof located at an entrance from which an electron
9 beam enters the internal magnetic shield, and the extension is
10 higher than the two short sides at the entrance.

1 11. The cathode ray tube of Claim 10, wherein
2 the extensions are a plurality of projections.

1 12. The cathode ray tube of Claim 11, wherein
2 the plurality of projections are rectangular or
3 semicircular.

1 13. The cathode ray tube of either of Claims 11 and 12, wherein
2 each of the two short sides has a cut a horizontal
3 length of which gradually decreases in a direction from the
4 entrance toward the mask.

1 14. The cathode ray tube of Claim 13, wherein
2 each cut of the two short sides includes at least two
3 cutting angles.

1 15. The cathode ray tube of either of Claims 11 and 12, wherein

2 a plurality of tensed wires are spanned between a pair
3 of opposite sides of the frame.